

Operating Manual

Sliding Door Drive Engine



Table of Contents

1.0 General	3
1.1 Information.....	3
1.2 Safety and Information Symbols.....	3
1.3 Instruction	3
2.0 Product Versions	3
2.1 Model.....	3
2.2 Motor.....	3
2.3 Opening Direction.....	3
2.4 Form.....	3
2.5 Type.....	3
2.6 Design.....	3
2.7 Assembly.....	3
2.8 Example (wall-mounting).....	3
2.9 Terminal (optional).....	4
2.9.1 Basic function.....	4
2.9.2 Operating states.....	4
2.9.3 Key function.....	4
2.9.4 Parameter settings.....	4
3.0 Range of application	6
3.1 Application Area.....	6
3.2 Improper use.....	6
3.3 Safety.....	6
4.0 Assembly	6
5.0 Putting into operation	6
5.1 Precondition.....	6
5.2 Set-up procedure.....	6
5.2.1 with terminal (plug-in terminal 50-53).....	6
5.2.2 with notebook (plug-in terminal 1-3).....	6
5.3 Fault clearance during putting into operation procedure.....	6
6.0 Features	7
6.1 Standard feature.....	7
6.2 Optional Features	7
6.3 Safety features.....	7
7.0 Maintenance / Safety check	8
8.1 Error code / Trouble Shooting.....	8
9.0 Parameters	9
9.1 Parameter list Terminal / RS232.....	9
9.2 Terms used on parameter list.....	10
9.2.1 Description.....	10
10.0 Setup by RS232 (PC, notebook)	14
10.1 Configuration.....	14
10.2 List.....	15
11.0 Terminal connection diagrams	16
11.1 Wiring diagram (maximum total cable length 10m).....	16
11.2 Terminal assignment.....	17
12.0 Dimensions	17
12.1 Sectional drawing one-wing drive.....	18
12.2 Sectional drawing telescopic and two-wing drive.....	19

1.0 General

1.1 Information

The operating instructions are handed over together with the sliding door driving mechanism. They serve as supporting material for the user in case of questions as to the professional use and as a basis for the mechanic on site when carrying out assembly, checking and fault clearing work.

The door driving mechanism has been checked and complies with the following directives:

- DIN 18650-1/2 automated door systems – product requirements / safety
- Low voltage directive 2006/95/EG
- Electromagnetic compatibility (EMC)
- EN61000-3-2, 3
- EN61000-4-2, 3, 4, 5, 6, 8, 11

The above listed electrical properties qualify the door driving mechanism for the CE safety seal.



1.2 Safety and Information Symbols

Important safety instructions and useful tips are listed in the manual as shown below.



DANGER / CAUTION! High risk for people and the system in case of inappropriate handling.



TIPS & INFORMATION! Useful hints and tips you should pay particular attention to.

1.3 Instruction

The professional use and the risks in case of improper use must be pointed out to permanent users of a door system.

The appropriate operating instructions serve as an aid.

2.0 Product Versions

2.1 Model

- Electrical
- Manuell
- Half – Automatic

2.2 Motor

- Right
- Left

2.3 Opening Direction

- DIN Right
- DIN Left

2.4 Form

- Straight
- Round Arche

2.5 Type

- One – Winged
- Two – Winged (SK)
- Telescope (SL)

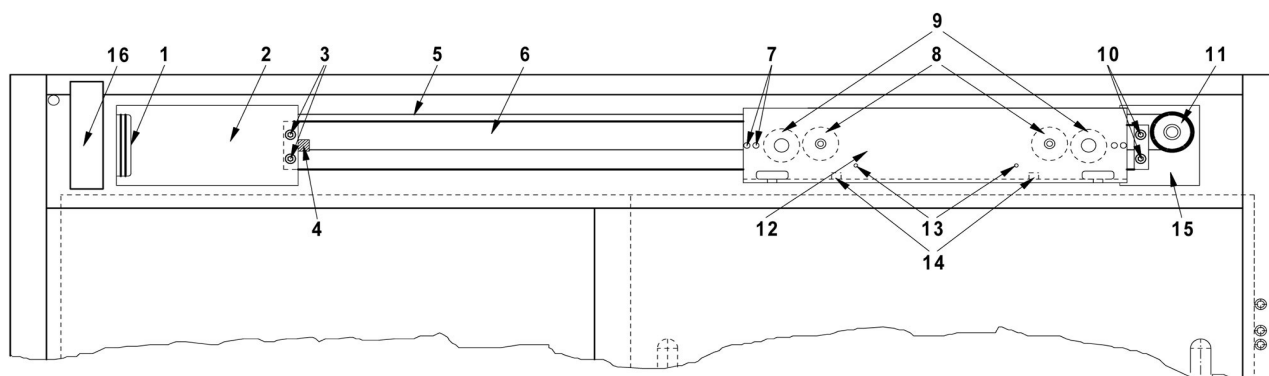
2.6 Design

- Standard up to 150kg
- Heavy up to 250kg
- Load up to 40kg

2.7 Assembly

- Anchorage Wall
- Anchorage Ceiling

2.8 Example (wall-mounting)



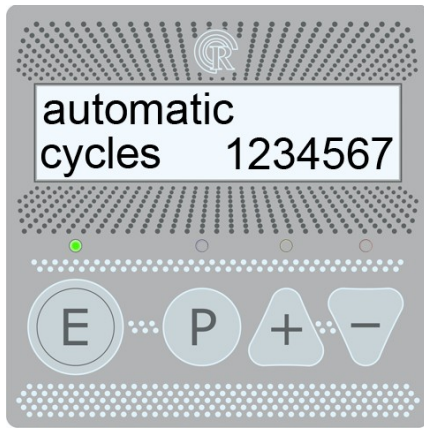
- (1) Electrical terminal strip
- (2) Motor, control unit
- (3) Sliding rail fixing
- (4) End puffer

- (5) Electrical terminal strip
- (6) Motor, control unit
- (7) Sliding rail fixing
- (8) End buffer

- (9) Roller
- (10) Sliding rail mounting
- (11) Toothed belt deflecting device
- (12) Trolley

- (13) Potential equalisation
- (14) Derailing safety device
- (15) Counter plate
- (16) External power supply

2.9 Terminal (optional)



>Terminal display in automatic mode<

The terminal consists of an LCD display with 16 x 2 characters, four status LEDs and a keyboard with four keys.

2.9.1 Basic function

There are three basic terminal functions at the user's disposal:

1. Status display, all messages are displayed in plain text. LEDs offer additional information.
2. Parameter input
3. Program Selector (PS)

2.9.2 Operating states

The display and the four coloured LEDs show the actual operating state.

- ➔ Green LED >permanent< : ready for operation
- ➔ Blue LED >blinking< : selecting mode PS
- ➔ Blue LED >permanent< : PS active
- ➔ Yellow LED >blinking< : parameter input mode
- ➔ Yellow LED >permanent< : safety check due
- ➔ Red LED >flashing< : password protect. active
- ➔ Red LED >permanent< : fatal error

2.9.3 Key function

<E> Acceptance of the selected parameters/functions.

<P> Three functions can be activated:

1. To switch from main level to parameter level and vice versa.
2. Abort at parameter or PS level
3. Position change in password or date/time input

<+> and <-> have two functions:

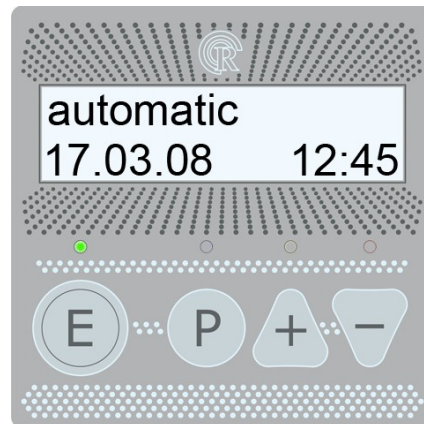
1. Selection of the parameter number or the parameter value
2. Selection of the PS function

2.9.4 Parameter settings

The parameters are factory preset according to your requirements and the relevant standards.

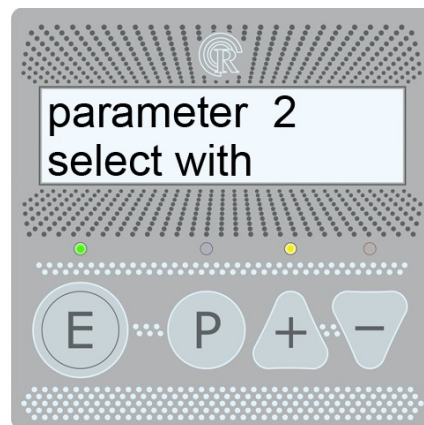
⚠ Changes of parameter are to be made only by authorized service personell. Inappropriate changes of the parameter values will revoke the manufacturers liability/warranty for damage resulting from it.

Example: Changing of the open time
>COMPLETELY OPEN 1<



>Terminal display in automatic mode PS<

Press <P> :



>Terminal display parameter input<

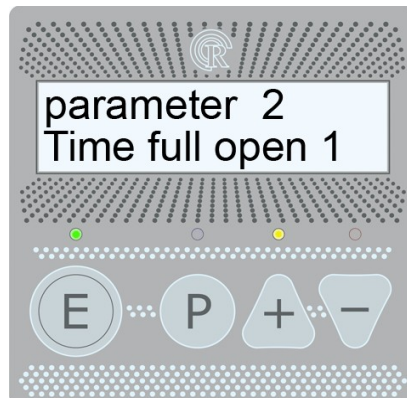
Use the <+> or <-> key to select the desired parameter.



The parameter list is in Chapter 9.1.



By means of parameter 62 all parameters are set back to the factory setting.



>Display after pressing <+> key

Use the **<E>** key to acknowledge the selected parameter.

(Use the **<P>** key to abort the process)



>Display of the current parameter value<

Use the **<+>** or **<->** key to change the desired value.

Use the **<E>** key to accept the preset parameter value (here 12s).



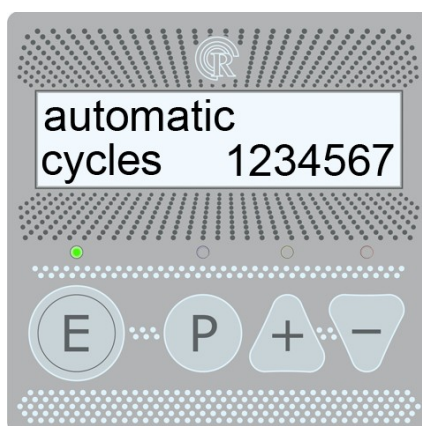
>Display after pressing **<E>** key<

2.9.5 Program selector

The following modes are available:

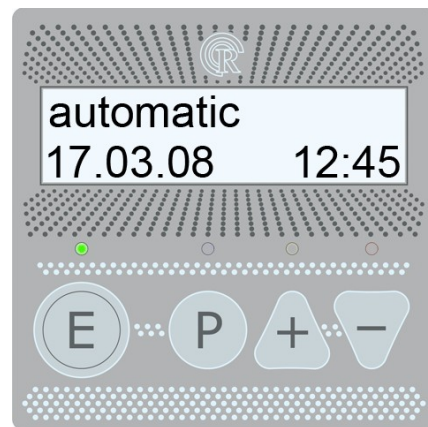
1. Permanently open
2. Closing time [↑]
3. Winter mode [☀]
4. Electrical lock []
5. Winter mode and closing time [☀↑]
6. Manual mode

Example: PS mode >Closing time<



>Standard display, **PS inactive**<

Parameter 61 = select 1.



>Display **PS mode**<

Use the **<+>** or **<->** key to select the desired mode (here: Closing time [↑]). Use the **<E>** key to accept this mode.



>Display **PS mode active** (blue LED) (Closing time)<

2.9.6 Technical data

- Voltage Supply : 100 VAC – 240 VAC
50Hz – 60Hz
- Protection class (IP 00)
- Suitable only in dry locations
- Power supply for external equipment:
24 V DC / max. 1 A total input current
- Power consumption: max. 210 W
- Power consumption stand-by mode min.: 3 W
- Ambient temperature: -15°C to 50°C
- Humidity: max. 85% non-condensing
- Average power consumption: 4 W/h
- Max. speed of each door wing: 0,50 m/s
- Installation dimensions: (LxHxD) var. / 120 / 52 mm
- Door weights:

Standard	up to 150 kg
Heavy (SK)	up to 250 kg
Load (SL)	up to 400 kg

3.0 Range of application

3.1 Application Area

The driving mechanism has exclusively been designed for indoor use and for locations meeting similar requirements only. Without additional safety measures, the driving mechanism is only allowed to be mounted inside buildings. The driving mechanism has exclusively been designed for the automatic operation of sliding doors. The manufacturer will not assume any liability for applications beyond those specified.

3.2 Improper use

Individual components of different driving mechanisms are not necessarily interchangeable.

3.3 Safety

Use the driving mechanism only in perfect technical condition. Faults potentially affecting the safety must be cleared immediately. The Power must be disconnected until the fault has been cleared. If manual operation cannot be guaranteed, the open door must be secured to avoid accidental use. A written notice must be placed on both sides of the door.

The driving mechanism may only be operated by the operating elements intended for this purpose. The manual mode is indicated by an audible warning signal, except when the Pull and Go function (parameter 83) has been set.

In case of a power failure, a smooth manual opening of the door is guaranteed.

The door, in particular the driving unit, must be protected against humidity and moisture.

 **Unauthorized modifications of the driving mechanism as well as the installation of non-genuine spare parts will exclude any liability of the manufacturer for damages resulting therefrom.**

4.0 Assembly

Only authorized technical personell is allowed to carry out the assembly of the driving mechanism. The compulsory instruction on our premises is the basis for proper assembly. The instruction material includes all instructions required for assembly.

5.0 Putting into operation

The setting up of the driving mechanism for the putting into operation procedure described below must be repeated after each technical modification.

5.1 Precondition



The specifications in the operating instructions of the driving mechanism must be observed.

Assembly work at the door and the driving mechanism must have been finished and the height and the side clearances of the door leaf must have been adjusted such that a smooth pushing by hand along the total opening width is guaranteed. If the door leaf is rough-running, the set-up procedure must not be started.

5.2 Set-up procedure



A teach-in run is activated to identify the final positions. Keep all parts of the body away from any moving parts during this run, as the driving mechanism will be completely ready for operation only after a successful teach-in run. An acoustic warning signal is sounded during the set-up procedure.

Plug in main plug of the driving unit and/or turn on customer's main Power switch. An automatic diagnostic check starts. LEDs are blinking and the display indicates firmware version / module.

5.2.1 with terminal (plug-in terminal 50-53)

Press the <E> key until the automatic set-up procedure is started (approx. 9 seconds).

5.2.2 with notebook (plug-in terminal 1-3)

Select parameter 50 at the notebook. The automatic set-up procedure is started.



Notebook setting see chapter 10.0.

Data cable [item no.KA101.1005], USB/Serial adapter [item no.KA232.0000].



The teach-in run will have been finished successfully after 3 automatic opening processes. The door wing remains closed and the audible warning signal stops. The sliding door driving mechanism is now ready for operation.

5.3 Fault clearance during putting into operation procedure

If a fault occurs, all previous technical modifications will have to be checked. A possible fault statement is displayed in the terminal / LED (see chapter 8.1). Start set-up procedure again after fault clearance is finished.

6.0 Features

All licensed control elements such as push-buttons, light barriers, dynamic pressure switches, code keyboard, motion sensors etc. can be connected.



Keep all parts of the body away from any moving parts. Be extremely careful within the range of the driving unit!

6.1 Standard feature

Push-button for complete opening 1 (COMPLETE 1 [4.5])

The sliding door opens completely and closes automatically after a preset time period.

Push-button for partial opening (PARTLY [6.7])

The sliding door opens partly and closes automatically after a preset time period.

Push-button/switch for permanent opening (PERMANENT [8.9])

The sliding door opens completely and closes only after a push-button or the switch having been pressed anew.

Special input (SI [25.26])

Input for special applications (see parameter 51)

Lock/limit switch (KEY [27.28])

All control elements are deactivated. This is necessary for a mechanic lock.

Wall-mounted rubber contact strip (COMPLETE 2 [29.30])

The sliding door opens completely and closes automatically after the preset time period.

6.2 Optional Features



On request the following optional Extras can be enabled by modules.

Internal interlocking function (RS485 [14.15]) module 3

Two or more S4000 driving mechanisms can be mutually interlocked. As soon as one door is open/opened, the locking monitoring device will prevent another door belonging to the interlock from being opened.

A signal (visual/audible) of the interlock state via LOCrt+ [terminal 55,65] (interlocked) and LOCgn+ [terminal 56,65] (unlocked) is possible.

External interlocking function (K1/LOC [10.11/12.13]) module 3

A mutual interlocking with an external door is possible. As soon as one door is open/opened, the locking monitoring device will prevent another door belonging to the interlock from being opened.

A signalling (optical/acoustic) of the interlock state via LOCrt+ [terminal 55,65] (interlocked) and LOCgn+ [terminal 56,65] (unlocked) is possible.



The max. total output current of the switchable outputs CHK1/2, LOCrt+, LOCgn+ is 0.4A, maximum voltage is 24V DC.

Motion sensor (MS I / MS O [31-38]) module 1

Automatic opening of the door when an object is detected by the motion sensor/s. The door closes according to the preset stand open time.

Magnetic break (MB [44.45])

For special uses e.g. naval architecture.

Potential equalisation

Potential equalisation by sliding contact.

Other optional connections

Code keyboard, remote control, non-contact push-button, terminal, notebook, PC, fault detector identification etc.

6.3 Safety features

Electronic reversion

In both motion directions, the reversing force is preset to less than 150 N (static)?.

- If the door wing runs into an obstacle during its closing run, the door will reverse into **OPEN** direction. After a separately adjustable time (parameter 5) the door closes again. If the obstacle is not removed, this process will be repeated up to 3 times (adjustable by parameter 36). After that the door will remain open, until any key is pressed.
- If the door wing runs into an obstacle during its opening run, the door will stop and carry out the selected function in this position.

Safety element/s (LI 1/ LI 2 [61-66]) module 2

- An additional protection of the closing zone: The activated safety element causes the door wing to reverse immediately by detection of obstacles.
- An additional protection of the opening zone (LI 2 [61-62]): This safety function is laid out with multiple levels has an audible signal and causes on an active safety element and opening impulse.
 1. on a closed door, opening movement of 400 mm with low-speed and afterwards execution of the respective opening function.
 2. on a currently opening door, the immediate stop or a slow-speed drive until 400 mm and afterwards executes the respective opening function.

Emergency opening in case of power failure without emergency module

Manual emergency opening of the door in case of a power failure is easily possible (<50N), as there is no "self locking".

Emergency module (ACCU [Y-adaptor]) module 5

In case of a power failure, the door can be opened/closed approx. 50 times within one hour during normal operation. (Special features see parameter 82).



Maximum service life of accumulator modules according to manufacturer is 4 years. The accumulator must be replaced in a two- to four-year interval during a safety check.



Lead-gel-accumulators self-discharge during storage. In order to prevent permanent damages (total discharge) you must recharge the accumulators at least every 3 months!



You can order adequate chargers directly from Reisinger GmbH.

7.0 Maintenance / Safety check

A due safety check of the S 4000 is indicated by the yellow LED at the motor unit and/or the terminal. The maximum interval for checks is 12 months. In case of a large number of cycles or a delicate application, the interval for the checks must be reduced! (Parameter 81).

 A regular safety check is absolutely necessary for a permanent and safe operation of the sliding door system. This safety check must be carried out by technical personell trained by Reisinger GmbH. Any intervention by a third party will result in forfeiture of any warranty claims.

 According to the professional association directives DIN EN 18650-2, power-operated windows, doors and gates must be checked for safe operation before they are put into operation and at least once a year by a technical expert thereafter. The VOB/B 2006 directive §13 no.4 par.2 states: "In case of mechanical and electrical/electronic systems or parts thereof where the check affects safety and functional capabilities, the period of limitation for warranty claims will be two years. Notwithstanding §13 no.4 par. 1, if the customer has decided not to assign the safety check work to the contractor during the period of limitation."

 Before carrying out any work on the driving mechanism and on live components, it is absolutely necessary to unplug the main power plug thus interrupting the power supply!

8.0 Fault clearance

The sliding door driving mechanism continuously carries out self-diagnoses and adjusts itself automatically. In case of values beyond the set value range error messages are displayed. The error is indicated at the terminal in plain text and as a colour code on the LEDs installed at the driving unit at the same height as the connector strip.

8.1 Error code / Trouble Shooting

Colour code	>Error display<	Possible cause	Fault clearance	Reset
	Defective motor	Defective motor electronics	Replacement of driving unit by Service Personell	Not possible
	Reversed 5 times *	Obstacle on travel path	Remove obstacle	Press any key
	Temperature too high	Overload Ambient temperature too high	Clean sliding rail Adjust guide shoe	Wait until driving unit has cooled down – starts automatically again
	Wrong path	Toothed belt or driving belt skipped / torn No teach-in run has been carried out	Tighten or replace toothed belt / driving belt Remove obstacle	De-energize / power on Press and hold key <E> on the terminal for at least 8 seconds for teach-in run
	Teach-in run	Door hard-going Obstacle on travel path	Check door slate in powerless state Remove obstacle	De-energize / power on Press and hold key <E> on the terminal for at least 8 seconds for teach-in run
	Electrical lock self-monitoring safety element	Mechanical or electrical fault	Check of electrical lock by Service Personell	De-energize / power on Press and hold key <E> on the terminal for at least 8 seconds for teach-in run
	Current too high	Door hard-going	Check door slate in powerless state	De-energize / power on Press and hold key <E> on the terminal for at least 8 seconds for teach-in run
	Battery empty Defective memory	Defective/empty battery	Replacement of driving unit by Service Personell	Not possible

* Default value = 5 (Value is adjustable)

 The green LED  and white LED  (blinking) indicates a proper monitoring cycle.

9.0 Parameters

9.1 Parameter list Terminal / RS232

P	Designation Terminal	Designation RS232	min.	max.	Unit	Works setting
1	Time PARTLY OPEN	Time PARTLY OPEN	0	200	s	1
2	Time COMPLETELY OPEN 1	Time COMPLETELY OPEN 1	0	200	s	12
3	Time MS I	Time MS I	0	200	s	1
4	Time MS O	Time MS O	0	200	s	1
5	Time REV	Time REV	0	200	s	5
6	Time COMPLETELY OPEN 2	Time COMPLETELY OPEN 2	0	200	s	12
7	Electrical lock locking time	Electrical lock locking time	1	60	s	0
8	Autom. start	Autom. start	0	1		1
9	Password	Password	00000	99999		0
10	Width PERMANENTLY OPEN	Width PERMANENTLY OPEN	200	4000	mm	door-dependent
11	Width PARTLY OPEN	Width PARTLY OPEN	200	4000	mm	door-dependent
12	Width COMPLETELY OPEN 1	Width COMPLETELY OPEN 1	200	4000	mm	door-dependent
13	Width MS I	Width MS I	200	4000	mm	door-dependent
14	Width MS O	Width MS O	200	4000	mm	door-dependent
15	Width PERMANENTLY PARTLY OPEN	Width PERMANENTLY PARTLY OPEN	200	4000	mm	door-dependent
16	Width COMPLETELY OPEN 2	Width COMPLETELY OPEN 2	200	4000	mm	door-dependent
17	Running-in OPEN	Running-in zone OPEN	10	200	mm	40
18	Running-in CLOSE	Running-in zone CLOSE	10	200	mm	50
19	Safe distance	Safe distance	0	30	mm	10
21	Speed OPEN	Speed OPEN	1	500	mm/s	300
22	Speed CLOSE	Speed CLOSE	1	300	mm/s	200
23	Speed RUNNING-IN	Speed RUNNING-IN	1	50	mm/s	25
24	Speed TEACH-IN	Speed TEACH-IN	1	50	mm/s	35
31	REV sensit. OPEN	REV sensitivity OPEN	20	1100		700
32	REV sensit. CLOSE	REV sensitivity CLOSE	20	1100		500
33	Acceleration slope	Acceleration slope	0	2000		500
34	Braking slope OPEN	Braking slope OPEN	0	2000		400
35	Braking slope CLOSE	Braking slope CLOSE	0	2000		1000
36	REV cycles	REV cycles	1	9999		5
37	DTA	DTA	0	1		0
38	Accel. slope CLOSE	Accel. slope CLOSE	0	2000		300
40	Language	Language	1	2		1
41	Date	Date				dd.mm.yy
42	Time	Time				hh:mm:ss
43	Summertime	Summertime	0	1		dd.mm.yy
50	Teach-in run	Teach-in run				

P	Designation Terminal	Designation RS232	min.	max.	Works setting
51	Special function	Special function	0	8	0
53	Summer/winter	Summer/winter mode	0	1	0
54	Width su/wi	Opening width su/wi	40	100	80
55	Closing time	Closing time	0	1	0
57	Electrical lock	Electrical lock	0	1	0
58	Interlock K 1 S/I	Interlock1 NO/NC	0	1	0
59	Autom. CLOSE REV	Autom. CLOSE after REV	0	1	1
60	Statusdisplay				
61	PS	Program selector	0	1	0
62	Works setting	Works setting			
63	Lighting frame	Lighting frame	0	1	0
64	Relay K2	Relay K2	0	1	1
65	Acoustic signals	Acoustic signals	0	1	1
66	Autom. holding open	Autom. holding open	0	2	0
70	Lock time 1 start closing time	Lock time 1 start closing time			hh:mm:ss
71	Lock time 1 end closing time	Lock time 1 end closing time			hh:mm:ss
72	Lock time 2 start closing time	Lock time 2 start closing time			hh:mm:ss
73	Lock time 2 end closing time	Lock time 2 end closing time			hh:mm:ss
74	Lock time 3 start closing time	Lock time 3 start closing time			hh:mm:ss
75	Lock time 3 end closing time	Lock time 3 end closing time			hh:mm:ss
76	Lock time 1 check	Lock time 1 check	0	1	0
77	Lock time 2 check	Lock time 2 check	0	1	0
78	Lock time 3 check	Lock time 3 check	0	1	0
80	Safety check	Safety check			
81	Safety interval	Safety interval	3	12	12
82	Accumulator check	Accumulator check	0	2	0
83	Pull and Go	Pull and Go	0	4	1
84	Safety elements	Safety elements	0	2	0
85	Number of safety elements	Number of safety elements	1	2	1
86	Light barrier 1 self-check	Light barrier 1 self-check	0	1	0
87	Light barrier 2 self-check	Light barrier 2 self-check	0	1	0
88	Key lock time start	Key lock time start			hh:mm:ss
89	Key lock time end	Key lock time end			hh:mm:ss
91	Erection (0=R/1=L)	Erection R/L	0	1	door-dependent
95	Modules	Enable modules			

9.2 Terms used on parameter list

Time

The time the door remains in OPEN position; unit seconds.

Width

The width is the travel path of the door from CLOSE position to OPEN position; unit millimeters.

Running-in zone

The driving unit has two running-in zones – one before reaching the CLOSE position and one before reaching the OPEN position.

In the running-in zones, the driving unit slowly travels into its limit / end positions; unit millimeters.

Speed

Speed is the travelling speed of the door in OPEN or CLOSE direction; unit millimeters/second.

Reversing sensitivity

The reversing sensitivity is a central protective function. It defines the reversing point of the driving unit where the travelling direction is reversed when running into an obstacle;

No unit – small values signify high sensitivity, great values signify low sensitivity.

Slope

Slope means the smooth starting or slowing down of the driving mechanism. No unit – small values signify a steep slope (i.e. jerky start), great values signify a gentle slope (i.e. smooth start).

9.2.1 Description

Parameter 1 :	Stand open time in seconds for partial opening
Parameter 2 :	Stand open time in seconds for complete opening 1
Parameter 3 :	Stand open time in seconds for motion sensor Inside
Parameter 4 :	Stand open time in seconds for motion sensor Outside
Parameter 5 :	Stand open time in seconds after reversing
Parameter 6 :	Stand open time in seconds for complete opening 2
Parameter 7 :	Delay time until activation of electrical lock
Parameter 8:	Automatic start 0 – door starts after key actuation 1 – door starts automatically
Parameter 9 :	Password protection of terminal. The 00000 value deactivates the password protection
Parameter 10 :	Opening width in millimeters for permanent opening
Parameter 11 :	Opening width in millimeters for partial opening
Parameter 12 :	Opening width in millimeters for complete opening 1
Parameter 13 :	Opening width in millimeters for motion sensor Inside
Parameter 14 :	Opening width in millimeters for motion sensor Outside
Parameter 15 :	Opening width in millimeters for permanent partial opening
Parameter 16 :	Opening width in millimeters for complete opening 2
Parameter 17 :	Running-in zone in millimeters for end position OPEN
Parameter 18 :	Running-in zone in millimeters for end position CLOSE
Parameter 19:	Safe distance in millimeters between trolley and end buffer of driving unit



A new teach-in run must be carried out after every change of speed!

Parameter 21 : Travelling speed in **OPEN** direction. The parameter value should be between 200 mm/s and 300 mm/s.
In case of any change in speed, a new teach-in run must be carried out!

- Parameter 22 : Travelling speed in CLOSE direction. The parameter value should be between 100 mm/s and 200 mm/s. **In case of any change in speed, a new teach-in run must be carried out!**
- Parameter 23 : Travelling speed to the OPEN/CLOSE end positions. The parameter value should be between 10 mm/s and 30 mm/s. **In case of any change in speed, a new teach-in run must be carried out!**
- Parameter 24 : Travelling speed during teach-in run. The parameter value should be between 30 mm/s and 40 mm/s. **In case of any change in speed, a new teach-in run must be carried out!**
- Parameter 31: Reversing sensitivity of the driving unit in OPEN direction when running into an obstacle. The works setting of the parameter value is 700. It should only be modified **with care!** Smaller values signify a higher sensitivity, greater values signify a lower sensitivity. In case of very small values, there is the risk of the door not properly closing any longer – in case of very great values there is an **increased risk of injury**.
- Parameter 32: Reversing sensitivity of the driving unit in CLOSE direction when running into an obstacle. The works setting of the parameter value is 500. It should only be modified **with care!** Smaller values signify a higher sensitivity, greater values signify a lower sensitivity. In case of very small values, there is the risk of the door not closing properly any longer – in case of very great values, there is an **increased risk of injury**.
- Parameter 33: The acceleration slope ensures a smooth starting of the door without any jerks. The works setting of the parameter value is 500. It should only be modified **with care!** Smaller values signify a steeper slope, i.e. the door is accelerated faster, greater values signify a more gentle slope, i.e. the door is accelerated less fast. **Attention!** This parameter affects the service life of the driving mechanism on a long-term basis. Very small values may reduce the service life of the driving mechanism. **In case of any change in the acceleration slope, a new teach-in run must be carried out!**
- Parameter 34: The braking slope OPEN ensures a fast slowing-down of the door in OPEN direction without any jerks. The works setting of the parameter value is 400. It should only be modified **with care!** Smaller values signify a steeper slope, i.e. the door is slowed down faster, greater values signify a more gentle slope, i.e. the door is slowed down less fast. **Attention!** This parameter affects the service life of the driving mechanism on a long-term basis. Very small values may reduce the service life of the driving mechanism. **In case of any change in the braking slope, a new teach-in run must be carried out!**
- Parameter 35: The braking slope CLOSE ensures a fast slowing-down of the door in CLOSE direction without any jerks. The works setting of the parameter value is 1000. It should only be modified **with care!** Smaller values signify a steeper slope, i.e. the door is slowed down faster, greater values signify a more gentle slope, i.e. the door is slowed down less fast. **Attention!** This parameter affects the service life of the driving mechanism on a long-term basis. Very small values may reduce the service life of the driving mechanism. **In case of any change in the braking slope, a new teach-in run must be carried out!**
- Parameter 36 : Number of reversion in case of obstacle on travel path
- Parameter 37 : Permanent partial-open
0 – disabled
1 – Function FullOpen
2 - converts to Permanent partial-open [29,30].
Define the opening width with **parameter 15**.
- Parameter 38: The speed-up slope CLOSE ensures a smooth and jerkless door run-up.
The parameter value is by default set to 300 and should only if at all be adjusted very carefully!
Smaller values translate to a steeper ramp, this means the door accelerates slower, higher values translate to a lower ramp, this means the door accelerates faster. **Attention!** This parameter affects the service life of the driving mechanism on a long-term basis. Very small values may reduce the service life of the driving mechanism. **In case of any change in the braking slope, a new teach-in run must be carried out!**
- Parameter 40: Language option for terminal and RS232 edition:
1 – German
2 – English
- Parameter 41: Actual date
- Parameter 42: Actual time
- Parameter 43: Summertime
- Parameter 50: Start teach-in run

Parameter 51:	Special functions: special input SO		
	0 – no function		
	1 – input (NO contact) SO activated – emergency opening in case of interlocking; door OPENS and remains in this position, until SI is deactivated. This opening of the door is indicated by an acoustic signal.		
	2 – input (NO contact) SO activated – opening in case of key lock time being active (P88 / P89)		
	3 – input (NO contact) SO activated – all current functions are interrupted and the door closes		
	4 – input (NC contact) SO activated – interlocking is deactivated. PERMANENTLY OPEN function will change to partial opening		
	5 – input (NC contact) SO activated – Pull and go is deactivated; all current functions are interrupted and the door closes		
	6 – input (NO contact) SO activated – door opens and remains in this position, until SI is deactivated		
	7 – input (NC contact) SO activated – door opens and remains in this position, until SI is deactivated		
	8 – input (push-button function) SO activated – Door interlocks automatically, on repeated triggering the door unlocks again. This function is only active if the door is closed.		
Parameter 53:	Summer mode / winter mode		
	0 – Summer mode, total opening width		
	1 – Winter mode, reduced opening width at xx% (P54).		
Parameter 54:	Opening width for winter mode in %		
Parameter 55:	Closing time		
	0 – normal mode		
	1 – closing time mode, motion sensor Outside is deactivated		
Parameter 57:	Automatic electrical lock		
	0 – deactivated		
	1 – active		
Parameter 58:	Interlock K1 as NO contact (0) or NC contact (1). K1 is activated at each opening of the door.		
Parameter 59:	1 – after reversing door remains in open position until time (parameter 5) has elapsed		
	0 – after reversing door remains in open position until a key is pressed		
Parameter 60:	Status display		
Parameter 61:	Program selector		
	0 – deactivated		
	1 – active		
Parameter 62:	All parameters are reset back to factory settings; after reset carry out teach-in run!		
Parameter 63:	Lighting effect display frame		
	0 – deactivated		
	1 – activated		
Parameter 64:	Default and maintenance message via output AUX		
	1 – output AUX indicates a default message or maintenance is due		
	0 – deactivated		
Parameter 65:	Audio signal		
	0 – deactivated		
	1 – active		
Parameter 66:	Power-operated holding in OPEN and CLOSE limit position		
	0 – deactivated		
	1 – active motor		
	2 – active with magnetic break		
Parameter 70	Lock time closing time 1:	start	(Motion sensor Outside is locked)
Parameter 71	Lock time closing time 1:	end	(Motion sensor Outside is activated)
Parameter 72	Lock time closing time 2:	start	(Motion sensor Outside is locked)
Parameter 73	Lock time closing time 2:	end	(Motion sensor Outside is activated)
Parameter 74	Lock time closing time 3:	start	(Motion sensor Outside is locked)
Parameter 75	Lock time closing time 3:	end	(Motion sensor Outside is activated)

Parameter 76	Activation lock time closing time 1 0 – normal mode 1 – closing time mode
Parameter 77	Activation lock time closing time 2 0 – normal mode 1 – closing time mode
Parameter 78	Activation lock time closing time 3 0 – normal mode 1 – closing time mode

Example : The motion sensor Outside is locked from 6 pm until 8 am

==>> 1. Start 1: (P70) = 06:00:00 pm, 2. End 1: (P71) = 08:00:00 am, 3. Closing time mode: (76) = 1

Parameter 80:	New safety check interval, internal counters are reset
Parameter 81:	Maintenance interval in months
Parameter 82:	Accumulator operation in case of power failure 0 – normal operation for approx. one hour at 50 cycles 1 – door OPENS in case of power failure and remains in this position until power returns 2 – all holding functions are deactivated; the door always closes immediately after an opening run
Parameter 83:	Pull and Go Function 0 – door cannot be operated manually. The door is kept closed by motor operation and an acoustic signal warns the user in case of manual opening. 1 – door can be manually operated. The door is opened by motor operation. The CompletelyOpen1 function is carried out. 2 – door can be manually operated. The door is opened by motor operation. The PartlyOpen function is carried out. 3 – door can be manually operated. The door is opened by motor operation. The PermanentlyOpen function is carried out.. 4 – door can be manually operated. The door opens automatically until the set opening width (parameter 15) is reached. The PermanentlyPartlyOpen function is carried out.
Parameter 84:	Safety elements: 0 – deactivated 1 – active (safeguarding main closure-edge) 2 – active (safeguarding main and side closure-edge)
Parameter 85:	Number of safety elements: 1 – Operation with one safety element 2 – Operation with two safety elements
Parameter 86:	Self-monitoring function for safety element 1: 0 - deactivated 1 – active
Parameter 87:	Self-monitoring function for safety element 2: 0 – deactivated 1 – active
Parameter 88	Key lock time start – time when all operating elements are locked.
Parameter 89	Key lock time end – time when all operating elements are reactivated.

Example : The operating elements are locked from 4 pm until 6 am

==>> 1. Start: (P88) = 04:00:00 pm, 2. End: (P89) = 06:00:00 am

Parameter 91	Erection right / left: 0 – right 1 – left
Parameter 95	Enable program modules (5-digit); 1 – motion sensor 2 – safety elements 3 – interlocking function 4 – self-monitoring function for safety elements 5 – battery / accumulator operation (emergency power)

10.0 Setup by RS232 (PC, notebook)

For the comfortable set-up of the S 4000 a terminal program (Hyper terminal) and a data cable (item number KA101.1005) are required. You will find the program under **Programs/Accessories**. (Windows 98,ME,2000,XP)

10.1 Configuration

Before the first start the following connection settings must be entered.

- Enter connection name and select icon:

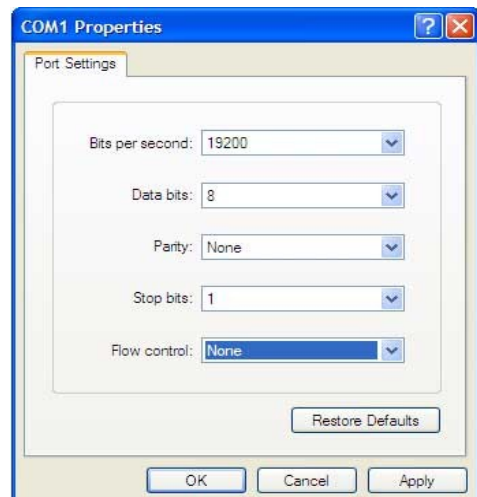


- Select serial port:

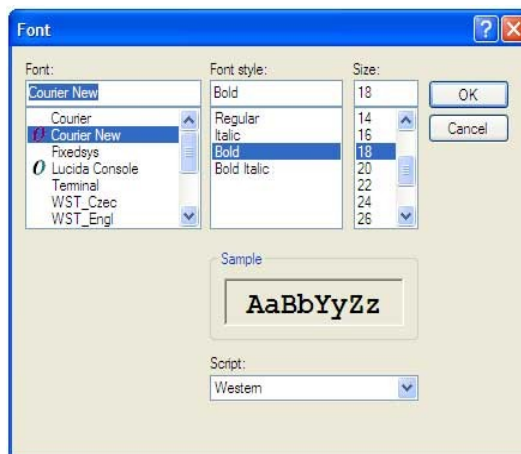


Note: If you are using the USB-to-Serial adapter cable, you have to choose the emulated port.

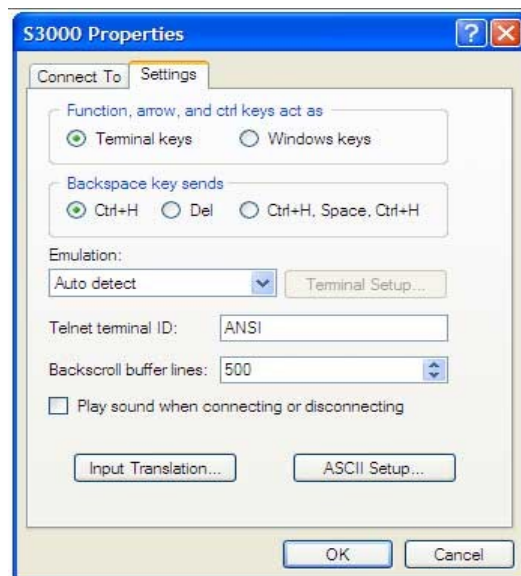
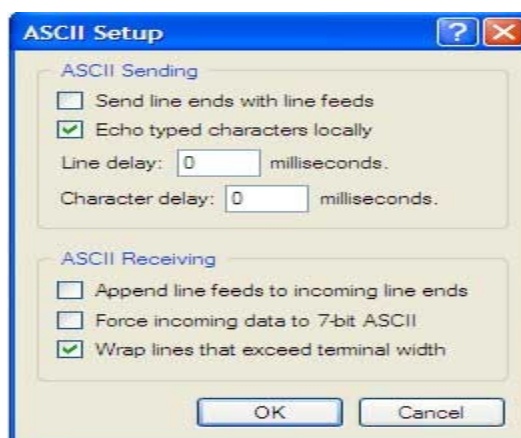
- Enter connection settings:



- Select font and size:



- Other Settings:



Complete data connection.

Plug in data cable [terminal 1-3] and connect it to the PC/Notebook (9-pole D-Sub plug) to the serial interface (RS 232).

If you quit the terminal application, don't forget to save your profile.



Important !! The sliding door must be closed during data transmission.

10.2 List

Start command: sys ↵

Page 1:

```
Automatic door      S 4000      L      ETyp: 123 5
Reisinger GmbH (c) 2008 V 1.10 S/N : 0751001 MTyp: SK
-----
1. Time partial open      1 [ s]      21. Speed open      221 [mm/s]
2. Time full open 1      2 [ s]      22. Speed close     150 [mm/s]
3. Time motion sensor in  1 [ s]      23. Speed slow area  25 [mm/s]
4. Time motion sensor ex  1 [ s]      24. Speed reference  36 [mm/s]
5. Time reverse           1 [ s]      25. --
6. Time full open 2     12 [ s]      26. --
7. Time lock delay       1 [ s]      27. --
8. auto start            1 [--]      28. --
9. Password              0          29. --
10. Width durable open   1133 [mm]     30. --
11. Width partial open   1133 [mm]     31. Open sensitivity  700 [--]
12. Width full open 1    1133 [mm]     32. Close sensitivity 500 [--]
13. Width motion sensor in 1133 [mm]     33. Acceleration ramp open 500 [--]
14. Width motion sensor ex 1133 [mm]     34. Braking ramp open  500 [--]
15. Width durable open 2   500 [mm]     35. Braking ramp close 1000 [--]
16. Width full open 2     1133 [mm]     36. Reverse cycles    3 [--]
17. Slow motion area open 40 [mm]      37. Perm.open2        1 [--]
18. Slow motion area close 50 [mm]      38. Acceleration ramp close 300 [--]
19. Security distance open 10 [mm]      39. --
20. --                    40. Language          2 [--]
0. Close terminal        98. P41..P80  97. P81..P95
```

Page 2:

```
Automatic door      S 4000      L      ETyp: 123 5
Reisinger GmbH (c) 2008 V 1.10 S/N : 0751001 MTyp: SK
-----
41. Date                  14.03.08      61. Program switch    0 [--]
42. Time                  09:38:22      62. Factory setting
43. daylight summer time  0 [--]      63. LED frame         1 [--]
44. --                    64. Output AUX        1 [--]
45. --                    65. Acoustic signals  1 [--]
46. --                    66. automatic open    0 [--]
47. --                    67. --
48. --                    68. --
49. --                    69. --
50. Reference drive
51. Special function      6 [--]      70. Lock time 1 begin  00:00:00
52. Referenz drive w/o WT
53. Summer-/winter operat. 0 [--]      71. Lock time 1 end    00:00:00
54. Width s/w            80 [ %]      72. Lock time 2 begin  00:00:00
55. After hour           0 [--]      73. Lock time 2 end    00:00:00
56. --                   74. Lock time 3 begin  00:00:00
57. Electrical key       0 [--]      75. Lock time 3 end    00:00:00
58. Interlocked K1 no/nc  0 [--]      76. Lock time 1 ctrl   0 [--]
59. atm. close after rev. 1 [--]      77. Lock time 2 ctrl   0 [--]
60. Status               78. Lock time 3 ctrl   0 [--]
0. Close terminal        79. --
                        80. Security check    18.01.09
                        97. P81..P95  99. P01..P40
```

Page 3:

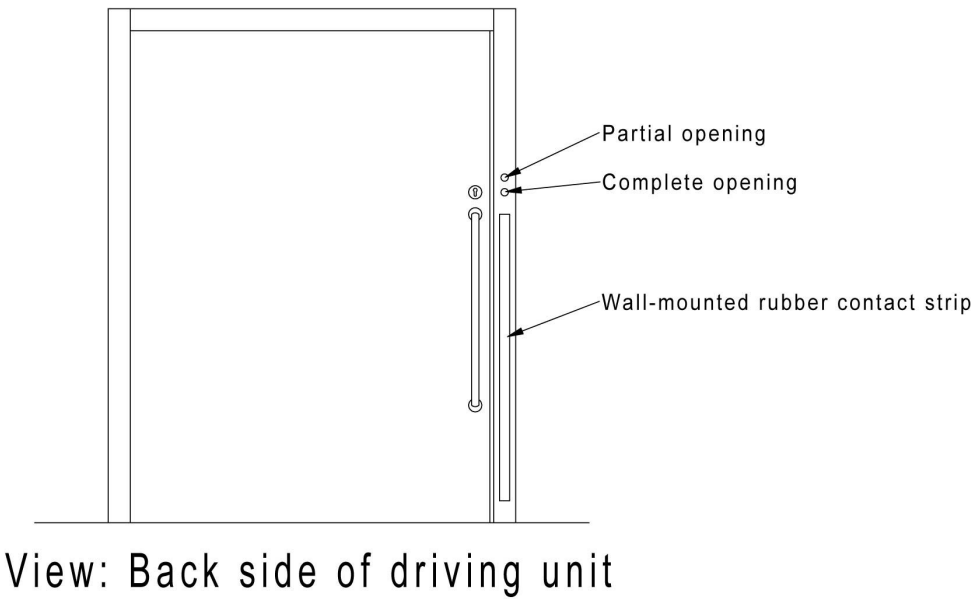
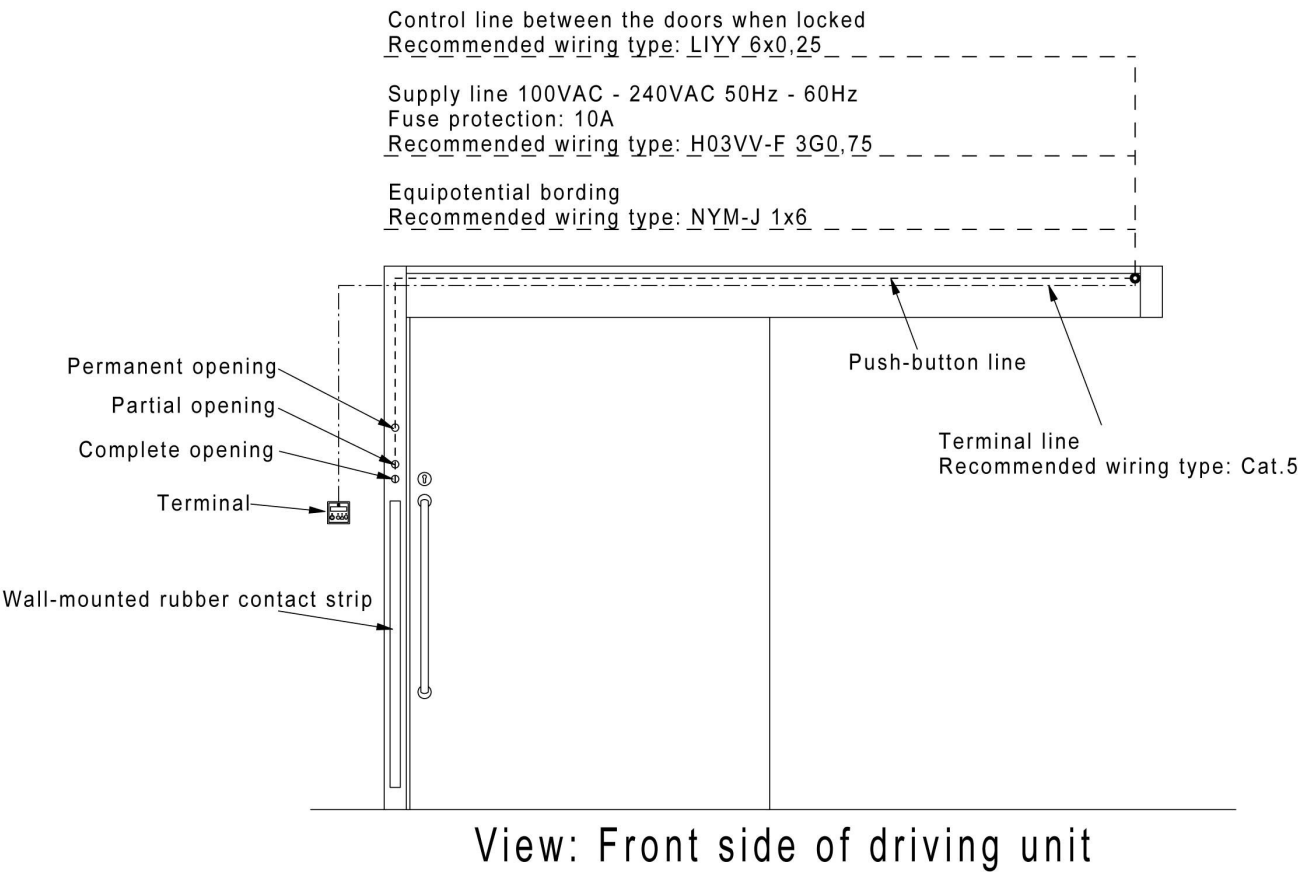
```
Automatic door      S 4000      L      ETyp: 123 5
Reisinger GmbH (c) 2008 V 1.10 S/N : 0751001 MTyp: SK
-----
81. Security interval     12 [mo]
82. Accu control          0 [--]
83. Pull and Go          1 [--]
84. Light beam           1 [--]
85. No. of Light beam     2 [--]
86. Li1 self check        0 [--]
87. Li2 self check        0 [--]
88. Key lock time begin   00:00:00
89. Key lock time end     00:00:00
91. Open direct.(0=R/L=1) 1 [--]

95. Activate module

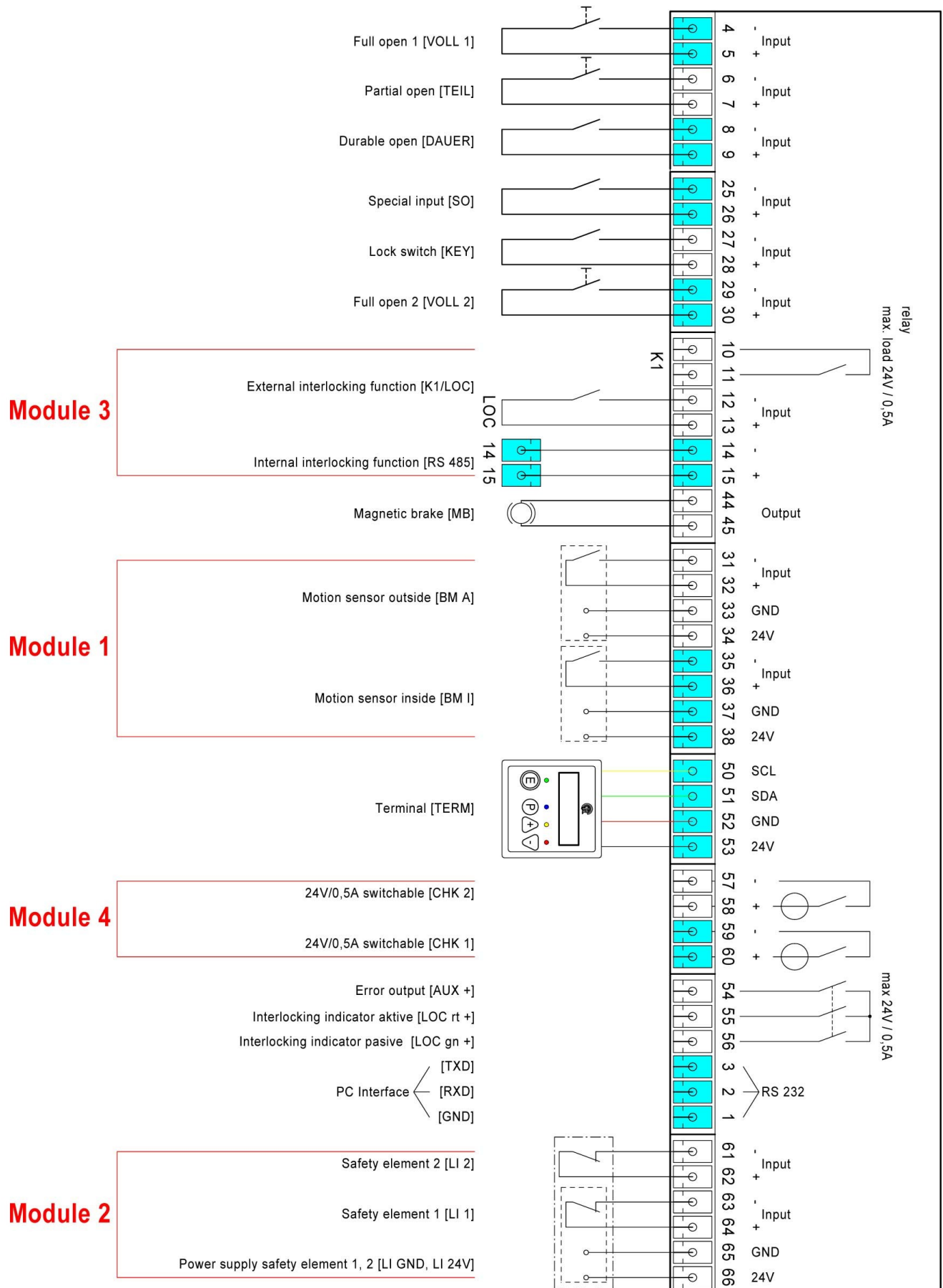
0. Close terminal        99. P01..P40  98. P41..P80
```

11.0 Terminal connection diagrams

11.1 Wiring diagram (maximum total cable length 10m)

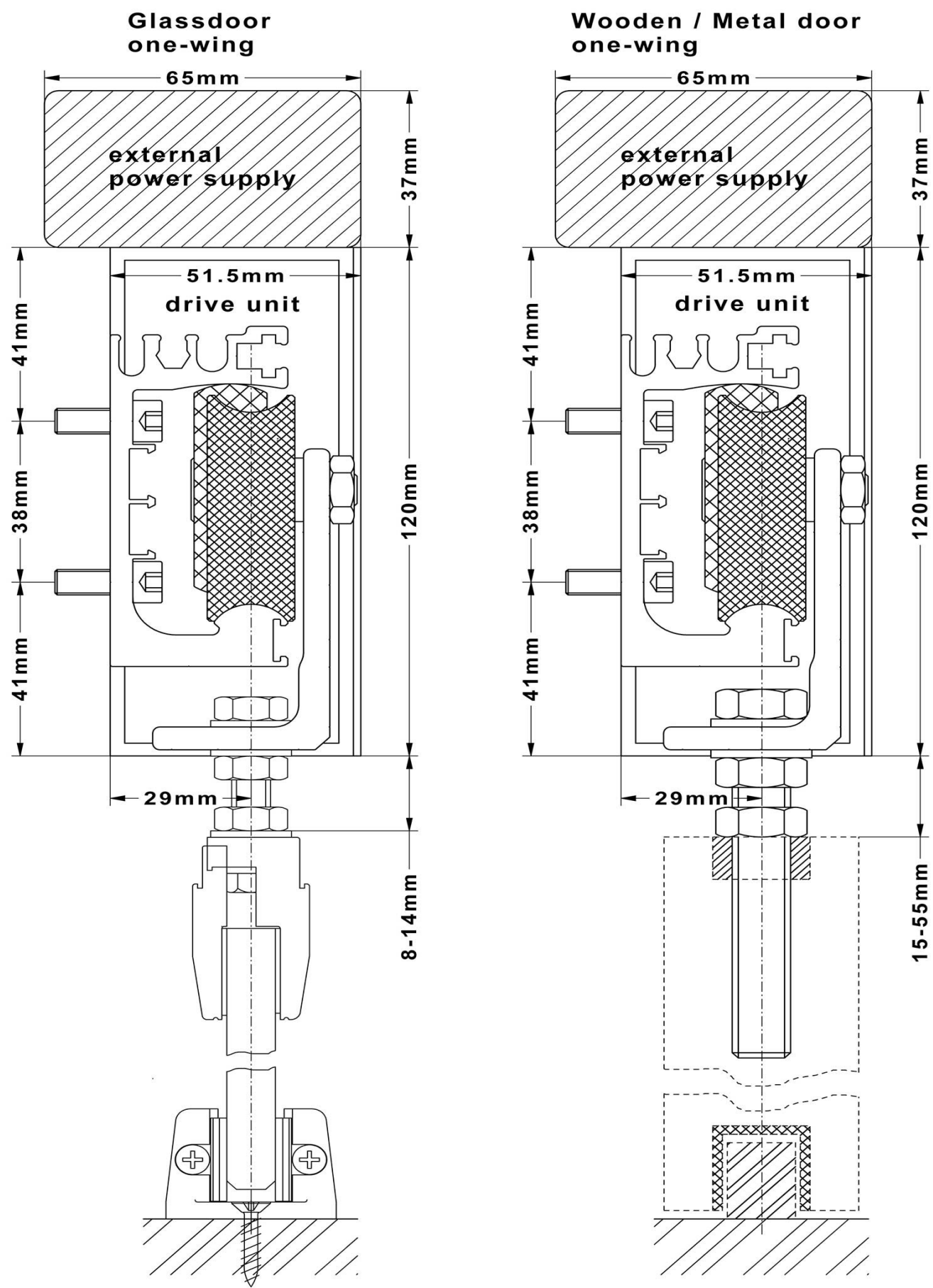


11.2 Terminal assignment

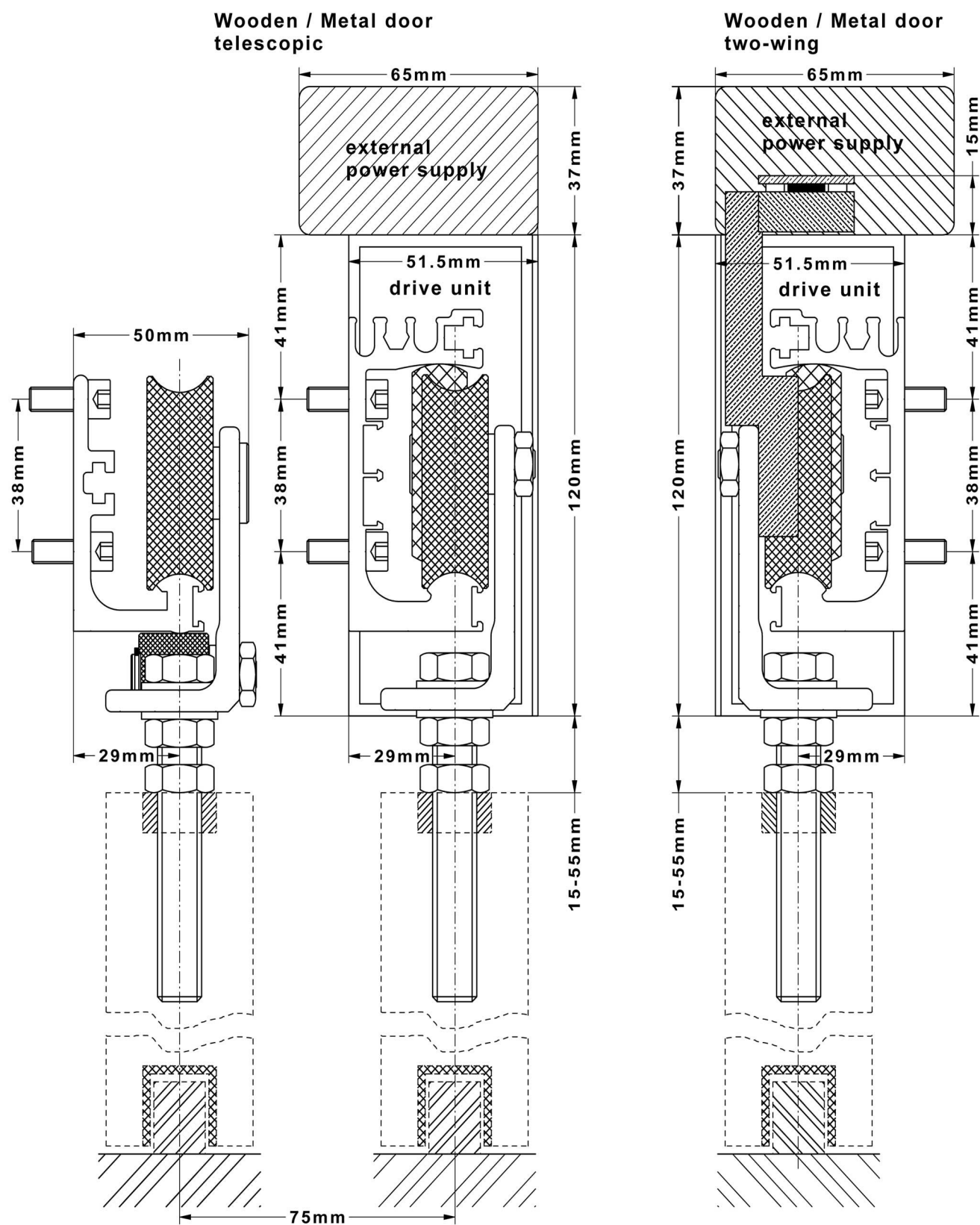


12.0 Dimensions

12.1 Sectional drawing one-wing drive



12.2 Sectional drawing telescopic and two-wing drive



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